

Danilo Dini-Curriculum Vitae

Danilo Dini (D.D.) si è laureato in Chimica all'Università di Roma "La Sapienza" nel 1994 sotto la tutorship del Prof. Franco Decker con il massimo dei voti presentando una tesi sull'elettrocromismo di ossidi metallici. La tesi di laurea riportava lo studio delle proprietà ottiche, meccaniche, elettrochimiche e spettrali dell'ossido di tungsteno (VI) nella configurazione di film sottile. Per questo lavoro di tesi D.D. ha ottenuto nel 1994 il Premio "Luigi Grifone" della Società Chimica Italiana per la miglior tesi italiana in Elettrochimica dell'anno ed ha pubblicato i relativi lavori:

The electrochromic response of tungsten bronzes M_xWO_3 with different ions and insertion rates

E. Masetti, D. Dini, F. Decker,
Solar Energy Mater. 39, 301-307 (1995)

A comparison of the electrochromic properties of WO_3 films intercalated with H^+ , Li^+ and Na^+

D. Dini, F. Decker, E. Masetti
J. Appl. Electrochem. 26, 647-653 (1996)

Stress in thin films of metal oxide electrodes for intercalation reactions

D. Dini, F. Decker
Electrochim. Acta 43, 2919-2923 (1998)

Stress changes in electrochromic thin films : laser beam deflection method (LBDM) as a tool for the analysis of intercalation processes

D. Dini*, S. Passerini, B. Scrosati, F. Decker
Solar Energy Mater. Solar Cells 56, 213- 221 (1999)

Ha conseguito nel 1998 il dottorato in Scienza dei Materiali nella stessa università con una tesi sulla deposizione e la modulazione elettrochimica delle proprietà spettrali, elettroniche e fotoelettrochimiche di politiofeni derivati da monomeri tertiofenici regio regolari pubblicando la seguente serie di lavori:

D. Dini*, F. Decker, F. Andreani, E. Salatelli, P. Hapiot
A comparative study of isomeric polyalkylterthiophenes with regular regiochemistry of substitution: Electrochemical synthesis
Polymer 41, 6473-6480 (2000)

D. Dini, F. Decker, G. Zotti, G. Schiavon, S. Zecchin, F. Andreani, E. Salatelli
A comparative study of isomeric polyalkylterthiophenes with regular regiochemistry of substitution : Characterization of electrochemical doping process
Chem. Mater. 11, 3484-3489 (1999)

L. Micaroni, D. Dini, F. Decker, M.A. De Paoli
Electrosynthesis and characterization of poly(3-methylthiophene) on different substrates
J. Solid State Electrochem. 3, 352-356 (1999)

A. Tarola, D. Dini, E. Salatelli, F. Andreani, F. Decker
Electrochemical Impedance Spectroscopy of Polyalkylterthiophenes
Electrochim. Acta 44, 4189-4193 (1999)

D. Dini*, F. Decker, G. Zotti

Study of polyalkylterthiophenes deposition processes

Synth. Met. 101, 22 (1999)

D. Dini*, F. Decker, G. Zotti, G. Schiavon, S. Zecchin, F. Andreani, E. Salatelli, M. Lanzi

EQCM Characterization of some substituted Polyterthiophenes

Electrochim. Acta 44, 1911-1917 (1999)

D. Dini, F. Decker, G. Zotti

Electrochemical growth of polyalkylthiophenes : *in-situ* characterization of deposition processes

Electrochem. Sol. St. Lett. 1, 217-219 (1998)

L. Micaroni, D. Dini, F. Decker, M.A. De Paoli

Photoelectrochemical response and photoconductivity of poly(3-methylthiophene)

Electrochim. Acta 44, 753-761 (1998)

M. Tsionsky, A.J. Bard, D. Dini, F. Decker

Polymer Films on Electrodes. 28 Scanning Electrochemical Microscopy Study of Electron Transfer at Polyalkylterthiophenes Films

Chem. Mater. 10, 2120-2126 (1998)

Durante lo svolgimento della tesi di dottorato D.D. è stato visitatore presso il laboratorio di Elettrochimica del Prof. Allen J. Bard (Dipartimento di Chimica dell'Università del Texas ad Austin, USA), per l'utilizzo del microscopio a scansione elettrochimica nello studio dell'attività elettrocatalitica di polimeri coniugati.

D.D. ha svolto un postdottorato all'Istituto di Chimica Fisica del Fritz-Haber-Institut der Max-Planck-Gesellschaft (Berlino, Germania) sotto la direzione del Prof. Gerhard Ertl (Premio Nobel per la Chimica nel 2008) sulla formazione di patterns e sull'elettrochemiluminescenza di polimeri conduttori. Su quest'ultimo tema D.D. ha pubblicato la serie di lavori:

D. Dini*, K. Doblhofer, G. Ertl

Nucleation of electrolyte convection channels as the first step in electrohydrodynamic pattern formation

Phys. Chem. Chem. Phys. 2, 1183-1186 (2000)

U. Janakiraman, D. Dini, A. Preusser, A.B. Holmes, R.E. Martin, K. Doblhofer

Electrochemiluminescence of Conjugated Polymer

Synth. Met. 121, 1685-1686 (2001)

D. Dini*, R.E. Martin, A.B. Holmes

Anodic and cathodic Electrogenerated Chemiluminescence in Conjugated Polymers

Adv. Funct. Mater. 12, 299-306 (2002)

D. Dini*

Electrochemiluminescence from Organic Emitters

Chem. Mater. 17, 1933-1945 (2005)

Successivamente D.D. ha svolto un postdottorato presso l'Istituto di Chimica Organica dell'Università di Tubinga (Germania) nel gruppo del Prof. Michael Hanack sulla sintesi e caratterizzazione di ftalocianine per elettrocromismo ed applicazioni di ottica non lineare mirando all'ottenimento di relazioni univoche fra struttura del complesso macrociclico e proprietà di assorbimento ottico allo stato eccitato. I lavori pubblicati da D.D. sul tema delle applicazioni ottiche delle ftalocianine e derivati sono elencati qui di seguito:

Calvete, M.J.F.; **D. Dini***

Conjugated macrocyclic materials with photoactivated optical absorption for the control of energy transmission delivered by pulsed radiations

J. Photochem. Photobio. C, 35, 56-73 (2018)

D. Dini*, Calvete M.J.F., Hanack M.

Nonlinear optical materials for the smart filtering of the optical radiation

Chem. Rev., 116, 13043-13233 (2016)

Santos C.I.M., Barata J.F.B., Calvete M.J.F., Vale L.S.H.P., **D. Dini***, Meneghetti M., Neves M.G.P.M.S., Faustino M.A.F., Tomé A.C., Cavaleiro J.A.S.

Synthesis and functionalization of corroles. An insight on their nonlinear optical absorption properties

Current Organic Synthesis 11, 29-41(2014)

D. Dini*, Moreno Meneghetti, Mario J.F. Calvete, Thomas Arndt, Colin Liddiard, Michael Hanack

Tetrabrominated lead naphthalocyanine for optical power limiting

Chem. Eur. J. 16, 1212-1220 (2010)

Eliana F.A. Carvalho, Mario J.F. Calvete, José A.S. Cavaleiro, **D. Dini***, Moreno Meneghetti, Augusto C. Tomé

Synthesis and high ranked NLT properties of new sulfonamide-substituted indium phthalocyanines

Inorg. Chim. Acta 363, 3945-3950 (2010)

Stefano Scuppa, Laura Orian, Danilo Dini, Saverio Santi, Moreno Meneghetti

Nonlinear Absorption Properties and Excited State Dynamics of Ferrocene

J. Phys. Chem. A 113, 9286-9294 (2009)

Vincenzo Amendola, Danilo Dini, Stefano Polizzi, Jing Shen, Karl M. Kadish, Mario J.F. Calvete, Michael Hanack, Moreno Meneghetti

Self-Healing of Gold Nanoparticles in the Presence of Zinc Phthalocyanines and Their Very Efficient Nonlinear Absorption Performances

J. Phys. Chem. C 113, 8688-8695 (2009)

Yunjing Li, Danilo Dini, Mario J.F. Calvete, Michael Hanack, Wenfang Sun

Photophysics and nonlinear optical properties of tetra- and octa-brominated silicon naphthalocyanines

J. Phys. Chem. A 112, 472-480 (2008)

Danilo Dini, Mario J.F. Calvete, Michael Hanack, Vincenzo Amendola, Moreno Meneghetti

Large two photon absorption cross sections of hemiporphyrazines in the excited state: A study of the multiphoton absorption process of hemiporphyrazines with different central metals

J. Am. Chem. Soc. 130, 12290-12298 (2008)

D. Dini*, Mario J.F. Calvete, Michael Hanack, Moreno Meneghetti

Indium phthalocyanines with different axial ligands: A study of the influence of the structure on the photophysics and optical limiting properties

J. Phys. Chem. A 112, 8515-8522 (2008)

Maria Pia Donzello, Elisa Viola, Costanza Bergami, Danilo Dini, Claudio Ercolani, Mauro Giustini, Karl M. Kadish, Moreno Meneghetti, Fabrizio Monacelli, Angela Rosa, Giampaolo Ricciardi

Tetra-2,3-pyrazinoporphyrazines with Externally Appended Pyridine Rings. 6. Chemical Behavior, Redox Properties, and Highly Effective Photosensitizing Activity for Singlet Oxygen Production of Penta- and Monopalladated Complexes in Dimethylformamide Solution

Inorg. Chem. 47, 8757-8766 (2008)

Wenfang Sun, Gang Wang, Yunjing Li, Mario J.F. Calvete, Danilo Dini, Michael Hanack
Axial halogen ligand effect on photophysics and optical power limiting of some indium naphthalocyanines

J. Phys. Chem. A 111, 3263-3270 (2007)

Maria Cristina Larciprete, Danilo Dini, Raffaella Ostuni, Concita Sibilìa, Mario Bertolotti, Xavier Alvarez-Mico, Rafael Gomez-Bombarelli, Mirko Cappeddu, Michael Scalora, Mark J. Bloemer
Optical switching of a photochromic bis-phenylazo compound in PMMA films

J. Mater. Sci. 42, 7866-7871 (2007)

Danilo Dini, Mario Calvete, Sergej Vagin, Michael Hanack
Design and synthesis of new-pyrrole based complexes for the evaluation of their nonlinear optical properties

J. Porphyrins Phthalocyanines 10, 261 (2006)

Danilo Dini, Mario J.F. Calvete, Michael Hanack, Vincenzo Amendola, Moreno Meneghetti

Demonstration of the optical limiting effect for an hemiporphyrazine

Chem. Commun. 2394-2396 (2006)

D. Dini*, Mario J.F. Calvete, Michael Hanack, Richard G.S. Pong, Steven R. Flom, James S. Shirk

Nonlinear transmission of a tetrabrominated naphthalocyaninato indium chloride

J. Phys. Chem. B 110, 12230-12239 (2006)

Yu Chen, Michael Hanack, Werner J. Blau, Danilo Dini, Ying Liu, Ying Lin, Jinrui Bai
Soluble axially substituted phthalocyanines: synthesis and nonlinear optical response

J. Mater. Sci. 41, 2169-2185 (2006)

Yu Chen, Yasuyuki Araki, Danilo Dini, Ying Liu, Osamu Ito, Mamoru Fujitsuka
The steady-state and time-resolved photophysical properties of a dimeric indium phthalocyanine complex.

Mater. Chem. Phys. 98, 212-216 (2006)

Wenfang Sun, Gang Wang, Danilo Dini, Michael Hanack
Photophysics and optical limiting of octaphenoxysubstituted indium naphthalocyanines with halogen axial ligand

J. Porphyrins Phthalocyanines 10, 509 (2006)

H. Peisert, I. Biswas, L. Zhang, M. Knupfer, M. Hanack, D. Dini, D. Batchelor, T. Chassé
Molecular orientation of substituted phthalocyanines: Influence of the substrate roughness

Surf. Sci. 600, 4024-4029 (2006)

D. Dini*, Mario Calvete, Sergej Vagin, Michael Hanack, Anders Eriksson, Cesar Lopes
Analysis of the nonlinear transmission properties of some naphthalocyanines

J. Porphyrins Phthalocyanines 10, 1165-1171 (2006)

Danilo Dini, Mario J.F. Calvete, Michael Hanack, Weizhe Chen, Wei Ji
Synthesis of axially substituted gallium, indium and thallium phthalocyanines with nonlinear optical properties

ARKIVOC 3, 77-96 (2006)

D. Dini*, Sergej Vagin, Michael Hanack, Vincenzo Amendola, Moreno Meneghetti
Nonlinear optical effects related to saturable and reverse saturable absorption by subphthalocyanines at 532 nm

Chem. Commun. 3796-3798 (2005)

Mario J.F. Calvete, Danilo Dini, Michael Hanack, Juan Carlos Sancho-Garcia, Weizhe Chen, Wei Ji

Synthesis, DFT calculations, linear and nonlinear optical properties of binuclear phthalocyanine gallium chloride

J. Mol. Modeling 12, 543-550 (2006)

Mario J.F. Calvete, Danilo Dini, Steven R. Flom, Michael Hanack, Richard G.S. Pong, James S. Shirk

Synthesis of a bisphthalocyanine and its nonlinear optical properties

Eur. J. Org. Chem. 3499-3509 (2005)

A. Haug, S. Harbeck, D. Dini, M. Hanack, M.J. Cook, H. Peisert, T. Chassé

Alkyl chain effects in thin films of substituted phthalocyanines studied using infrared spectroscopy

Appl. Surf. Sci. 252, 139-142 (2005)

Danilo Dini, Michael Hanack, Moreno Meneghetti

Nonlinear optical properties of tetrapyrizinoporphyrazinato indium chloride complex due to excited state absorption

J. Phys. Chem. B 109, 12691-12696 (2005)

Danilo Dini, Michael Hanack, Hans-Joachim Egelhaaf, Juan Carlos Sancho-García, Jerome Cornil

Synthesis of axially substituted tetrapyrizinoporphyrazinato metal complexes for optical limiting and study of their photophysical properties

J. Phys. Chem. B 109, 5425-5432 (2005)

S. Dick, H. Peisert, D. Dini, M. Hanack, M. J. Cook, I. Chambrier, T. Chassé

Influence of the alkyl-chains length on the electronic structure and interface properties of 1,4-octasubstituted Zinc Phthalocyanines thin films on gold

J. Appl. Phys. 97, 073715/1-8 (2005)

I. Biswas, L. Zhang, M. Knupfer, M. Hanack, D. Dini, M.J. Cook, I. Chambrier, T. Schmidt, D. Batchelor, T. Chassé

Orientation of substituted phthalocyanines on polycrystalline gold: distinguishing between the first layers and thin films

Chem. Phys. Lett. 403, 1-6 (2005)

Guo Ying Yang, Michael Hanack, Yiew Wang Lee, Danilo Dini, Jing Fang Pang

Fluorinated naphthalocyanines displaying simultaneous revers saturable absorption at 532 and 1064 nm

Adv. Mater. 17, 875-879 (2005)

Indro Biswas, Heiko Peisert, T. Schwieger, Danilo Dini, Michael Hanack, M. Knupfer, T. Schmidt, Thomas Chassé

Tetra-*t*-butyl magnesium phthalocyanine on gold: Electronic structure and molecular orientation

J. Chem. Phys. 122, 064710/1-8 (2005)

Helmut Bertagnolli, Werner J. Blau, Yu Chen, Danilo Dini, Martin P. Feth, Sean M. O'Flaherty, Michael Hanack, Venkata Krishnan

Synthesis, characterization and optical limiting properties of a gallium phthalocyanine dimer

J. Mater. Chem. 15, 683-689 (2005)

Maria Pia Donzello, Zoungping Ou, Danilo Dini, Moreno Meneghetti, Claudio Ercolani, Karl M. Kadish

Tetra-2,3-pyrazinoporphyrazines with Externally Appended Pyridine Rings. Part II. Metal Complexes of Tetrakis-2,3-[5,6-di(2-pyridyl)pyrazino]porphyrazine: Linear and Nonlinear Optical Properties and Electrochemical Behavior

Inorg. Chem. 43, 8637-8648 (2004)

D. Dini*, Mario Calvete, Sergej Vagin, Michael Hanack, Guo Ying Yang, Ji Wei, Chen Weizhe, Kenneth McEwan

Nonlinear Optical Absorption in Tetrapyrrolic Macrocycles

J. Porphyrins Phthalocyanines 8, 524 (2004)

Yu Chen, Danilo Dini, Michael Hanack, Mamoru Fujitsuka, Osamu Ito

Excited state properties of monomeric and dimeric axially bridged indium phthalocyanines upon UV-Vis laser irradiation

Chem. Commun. 340-341 (2004)

D. Dini*, Michael Hanack

Phthalocyanines and related compounds as materials for advanced technologies: Some examples

J. Porphyrins Phthalocyanines 8, 915-933 (2004)

Maria Pia Donzello, Danilo Dini, Giuseppe D'Arcangelo, Claudio Ercolani, Karl M. Kadish, Zhongping Ou, Pavel A. Stuzhin, Riqiang Zhan

Porphyrazines with Annulated Diazepine Rings. 2: An Alternative Synthetic Route to Tetrakis-2,3-(5,7-diphenyl-6H-1,4-diazepino) porphyrazines. New Metal Complexes, General Physicochemical Data, UV-Vis Linear and Optical Limiting Behavior, Electrochemical and Spectroelectrochemical Properties

J. Am. Chem. Soc. 125, 14190-14204 (2003)

Danilo Dini, Guo Ying Yang, Michael Hanack

Perfluorinated phthalocyanines for optical limiting : Evidence for the direct correlation between substituent electron withdrawing character and the nonlinear optical effect

J. Chem. Phys. 119, 4857-4864 (2003)

D. Dini*, Markus Barthel, Thorsten Schneider, Martin Ottmar, Sanjiv Verma, Michael Hanack

Phthalocyanines and Related Compounds as Switchable Materials upon Strong Irradiation: The Molecular Engineering behind the Optical Limiting Effect

Solid State Ionics 165, 289-303 (2003)

D. Dini*

Conjugated Molecules for the Smart Filtering of Intense Radiations

Int. J. Mol. Sci. 4, 291-300 (2003)

Guo Ying Yang, Michael Hanack, Yiew Wang Lee, Yu Chen, May Ka Yuen Lee, Danilo Dini

Synthesis and nonlinear optical properties of fluorine containing naphthalocyanines

Chem. Eur. J. 9, 2758-2762 (2003)

Sergej Vagin, Danilo Dini, Michael Hanack

Synthesis and Characterization of New Octaaryltetraazaporphyrinato Indium(III) Complexes for Optical Limiting

Inorg. Chem. 42, 2683-2694 (2003)

Yu Chen, L.R. Subramanian, Mamoru Fujitsuka, Osamu Ito, Sean O'Flaherty, Werner J. Blau, Thorsten Schneider, Danilo Dini, Michael Hanack

Synthesis and Optical Limiting Properties of Axially Bridged Phthalocyanines: [(t-Bu₄PcGa)₂O] and [(t-Bu₄PcIn)₂O]

Chem. Eur. J. 8, 4248-4254 (2002)

Markus Barthel, Danilo Dini, Sergej Vagin, Michael Hanack

An Easy Route of New Axially Substituted Titanium (IV) Phthalocyanines

Eur. J. Org. Chem. 3756-3762 (2002)

Michael Hanack, Danilo Dini, Markus Barthel, Sergej Vagin

Conjugated Macrocycles as Active Materials in Nonlinear Optical Processes: Optical Limiting Effect with Phthalocyanines and Related Compounds

Chem. Record 2, 129-148 (2002)

D.D. ha poi ottenuto una borsa di studio sia presso il laboratorio del Dr. James Shirk (Naval Research Laboratories, Washington, USA) che al Dipartimento di Scienze Chimiche dell'Università di Padova lavorando nel gruppo del Prof. Moreno Meneghetti per l'utilizzo di laser pulsati nello studio delle proprietà di stato eccitato e la polarizzabilità elettronica non lineare dei macrocicli coniugati in continuità e coerenza con quanto svolto da D.D. nel periodo di lavoro a Tubinga.

Prima dell'ingresso come ricercatore a tempo indeterminato presso il Dipartimento di Chimica dell'Università di Roma "La Sapienza" (2011), D.D. ha svolto attività di ricerca presso la School of Chemical Sciences della Dublin City University (DCU, Dublino, Irlanda) nel gruppo del Prof. Han Vos per lo studio di fattibilità di semiconduttori inorganici e coloranti per celle fotovoltaiche e celle solari di tipo Graetzel con le finalità di applicare materiali (sia molecolari che di tipo inorganico) e dispositivi in fotocatalisi, foto-elettrocatalisi e fotoconversione per generazione di energia elettrica. In questi ultimi campi D.D. ha pubblicato i lavori:

Yvonne Halpin, Laura Cleary, Lynda Cassidy, Sabine Horne, Danilo Dini, Wesley R. Browne, Johannes G. Vos

Spectroelectrochemical properties of homo- and heteroleptic ruthenium and osmium binuclear complexes: intercomponent communication as a function of energy differences between HOMO levels of bridge and metal centres

Dalton Trans. 4146-4153 (2009)

Muhammad Awais, Mahfujur Rahman, Don MacElroy, Nadia Coburn, Danilo Dini, Johannes G. Vos, Denis P. Dowling

Deposition and characterization of NiO_x coatings by magnetron sputtering for application in dye-sensitized solar cells

Surf. Coat. Techn. 204, 2729-2736 (2010)

Yvonne Halpin, Danilo Dini, Hamid M. Younis Ahmed, Lynda Cassidy, Wesley R. Browne, Johannes G. Vos

Excited state localization and internuclear interactions in asymmetric Ruthenium (II) and Osmium (II) bpy/trpy based dinuclear compounds

Inorg. Chem. 49, 2799-2807 (2010)

Gibson E.A., Awais M., Dini D., Dowling D.P., Pryce M.T., Vos J.G., Boschloo G., Hagfeldt A.

Dye sensitised solar cells with nickel oxide photocathodes prepared via scalable microwave sintering

Phys. Chem. Chem. Phys. 15, 2411-2420 (2013)

Awais M., D. Dini*, McElroy J.M.D., Halpin Y., Vos J.G., Dowling D.P.

Electrochemical characterization of NiO electrodes deposited via a scalable powder microblasting technique

J. Electroanal. Chem. 689, 185-192 (2013)

Halpin Y., Pryce M.T., Rau S., Dini D., Vos J.G.

Recent progress in the development of dinuclear photocatalysts for hydrogen generation

Dalton Trans. 42, 16243-16254 (2013)

Soman S., Singh Bindra G., Paul A., Groarke R., Manton J.C., Connaughton F.M., Schulz M., Dini D., Long C., Pryce M., Vos J.G.

Wavelength dependent photocatalytic H₂ generation using iridium-Pt/Pd complexes

Dalton Trans. 41, 12678-12680 (2012)

Muhammad Awais, Mahfujur Rahman, J.M. Don MacElroy, DaniloDini, Johannes G. Vos, Denis P. Dowling

Application of a novel microwave plasma treatment for the sintering of nickel oxide coatings for use in dye-sensitized solar cells

Surf. Coat. Techn. 205, S245-S249 (2011)

Ahmed H.M.Y., Coburn N., Dini D., De Jong J.J.D., Villani C., Browne W.R., Vos J.G.

Application of circular dichroism spectroscopy in the study of mixed-valence asymmetric ruthenium polypyridyl complexes

Inorg. Chem. 50, 5861-5863 (2011)

In seguito alla chiamata a Roma all'interno del Dip. di Chimica, D.D. si è occupato della ricerca sul tema delle celle solari fotoelettrochimiche di tipo p con particolare attenzione allo studio dei materiali elettrodici e sensibilizzatori. Più recentemente D.D. ha avviato lo studio delle celle solari a perovskite con architettura invertita utilizzando ossidi di metalli di transizione con proprietà semiconduttrici di tipo p. D.D. ha pubblicato i lavori seguenti avvalendosi della collaborazione dei gruppi di ricerca della Prof.ssa Claudia Barolo (Università di Torino), Prof. Aldo Di Carlo (Università di Roma, "Tor Vergata"), Prof. Ruggero Caminiti e Robertino Zanoni (Università di Roma, "La Sapienza"), Dr. Antonio Abate (Helmholtz Zentrum, Berlino, Germania), Prof. Anders Hagfeldt (EPFL, Losanna, Svizzera), Prof.ssa Elizabeth Gibson (University of Newcastle), Prof. Fabrice Odobel (Università di Nantes, Francia) e il Prof. Denis Dowling (University College Dublin, Dublino, Irlanda):

Di Girolamo, D.; Piccinni, M.; Matteocci, F.; Marrani, A.G.; Zanoni, R.; **D. Dini***

Investigating the Electrodeposition Mechanism of Anodically Grown NiOOH Films on Transparent Conductive Oxides

Electrochimica Acta, 319, 175-184 (2019)

Di Girolamo, D.; Matteocci, F.; Kosasih, F.U.; Chistiakova, G.; Zuo, W.; Korte, L.; Divitini, G.; Korte, L.; Ducati, C.; Di Carlo, A.; Dini, D.; Abate, A.

Stability and dark hysteresis correlate in NiO-based perovskite solar cell

Adv. Energy Mater., 1901642/1-10 (2019)

Di Girolamo, D.; Phung, N.; Jošt, M.; Al-Ashouri, A.; Chistiakova, G.; Li, J.; Márquez, J.A.; Unold, T.; Korte, L.; Albrecht, S.; Di Carlo, A.; **D. Dini***; Abate, A.

From Bulk to Surface: Sodium Treatment Reduces Recombination at the Nickel Oxide/Perovskite Interface

Adv. Mater. Interfaces, 1900789/1-11 (2019)

Bonomo, M.; Mariani, P.; Mura, F.; Di Carlo, A.; **D. Dini***

Nanocomposites of nickel oxide and zirconia for the preparation of photocathodes with improved performance in p-type dye-sensitized solar cells

J. Electrochem. Soc., 166, D290-D300 (2019)

Di Girolamo, D.; Ibrahim-Dar, M.; Dini, D.; Gontrani, L.; Caminiti, R.; Mattoni, A.; Grätzel, M.; Meloni, S.

Dual effect of humidity on cesium lead bromide: enhancement and degradation of perovskite film

J. Mater. Chem. A, 7, 12292-12302 (2019)

Bonomo, M.; Barbero, N.; Naponiello, G.; Giordano, M.; Dini, D.; Barolo, C.

Sodium Hydroxide pretreatment as an effective approach to reduce the dye/holes recombination reaction in p-type DSCs

Frontiers in Chemistry, 7, 99/1- 9 (2019)

Marrani, A.G.; Bonomo, M.; **D. Dini***

Adsorption dynamics of redox active species onto polarized surfaces of sensitized NiO

ACS Omega, 4, 1690-1699 (2019)

D. Dini*, Bonomo, M.; Decker, F.

Electrochemical and photoelectrochemical properties of nickel oxide (NiO) with nanostructured morphology for photoconversion applications

Frontiers in Chemistry, 6, 601/1-16 (2018)

Bonomo, M.; Di Carlo, A.; **D. Dini***

Study of the influence of the I-based electrolyte composition on the photoconversion properties of p-type dye-sensitized solar cells

J. Electrochem. Soc., 165, H889-H896 (2018)

Bonomo, M.; Gatti, D.; Barolo, C.; **D. Dini***

Effect of sensitization on the electrochemical properties of nanostructured NiO

Coatings, 8, 232 (2018)

Bonomo, M.; Sheehan, S.; Dowling, D.P.; Gontrani, L.; **D. Dini***

First Evidence of Electrode Reconstruction in Mesoporous NiO After Operation as Photocathode of Dye-Sensitized Solar Cells

ChemistrySelect, 3, 6729-6736 (2018)

Bonomo, M.; Di Carlo, A.; Centore, R.; Dini, D.; Carella, A.

New pyran-based dyes as efficient sensitizers of p-type dye-sensitized solar cells

Solar Energy, 169, 237-241 (2018)

Bonomo, M.; Naponiello, G.; Dini, D.

Oxidative dissolution of NiO in aqueous electrolyte: an impedance study

J. Electroanal. Chem., 816, 205-214 (2018)

Marrani, A.G.; Coico, A.C.; Giacco, D.; Zanoni, R.; Scaramuzza, F.A.; Schrebler, R.; Dini, D.; Bonomo, M.; Dalchiale, E.A.

Integration of graphene onto silicon through electrochemical reduction of graphene oxide layers in non-aqueous medium

Appl. Surf. Sci., 445, 404-414 (2018)

Bonomo, M.; Magistris, C.; Buscaino, R.; Fin, A.; Barolo, C.; **D. Dini***

Effect of sodium hydroxide pretreatment of NiO_x cathodes on the performance of squaraine-sensitized p-type dye-sensitized solar cells

ChemistrySelect, 3, 1066-1075 (2018)

Bonomo, M.; Saccone, D.; Magistris, C.; Barolo, C.; Cinà, L.; Di Carlo, A.; **D. Dini***

Influence of the conditions of sensitization on the characteristics of p-DSCs sensitized with asymmetric squaraines

J. Electrochem. Soc., 164, H1099-H1111 (2017)

Bonomo M., Carella A., Centore R., Di Carlo A., Dini D.

First examples of pyran based colorants as sensitizing agents of *p*-type dye-sensitized solar cells

J. Electrochem. Soc., 164, F1412-F1418(2017)

Bonomo, M.; Saccone, D.; Magistris, C.; Di Carlo, A.; Barolo, C.; **D. Dini***

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Complessivamente D.D. ha pubblicato più di 130 lavori su riviste scientifiche internazionali revisionate alla pari con IF > 1 riportando a Settembre 2019 un indice di Hirsch pari a 34 e a 29 senza autocitazioni (dati Scopus). D.D. ha partecipato a più di 30 congressi internazionali.